

Remarks

The above amendment is made to more clearly specify Applicant's invention in that the reforming zone includes a reformer catalyst, and is well-supported by the specification as originally filed.

The Office Action rejects claims 6, 8, 10, and 16 under 35 U.S.C. § 103(a) as unpatentable over Hirasawa JP04171262A in view of Chung et al US 5,250,094. This rejection is respectfully traversed.

The Office Action asserts that Hirasawa teaches a reforming system that includes each of the elements of Applicant's claimed invention except for a mat material comprising a plurality of layers of fibrous ceramic material and having a reflective surface facing the inlet and binder material comprising adhesive. Applicant's respectfully disagree and point out that Hirasawa does not relate to a reforming system at all, but instead relates to a fuel filter capable of *modifying* fuel, not reforming it. More specifically, Hirasawa does not disclose a device having a reformer zone comprising a reformer catalyst as required by Applicant's claims.

The Office Action's support for its assertions regarding Hirasawa is the use of the words "reform" and "reformed" in a *machine translation* of the Japanese published application. Given the well-known unreliability of such machine translations, Applicant's attorney conducted a simple corresponding patent search and identified a corresponding *English language* reference, U.S. Patent 5,108,618, which is submitted herewith in an Information Disclosure Statement. The '618 reference claims priority on the same application as the Japanese reference cited in the Office Action and, from an examination of the drawings, is clearly directed to the same invention as the Japanese reference.

Applicant submits that the terms "reformer" and "reforming" have an art-recognized definition involving the reaction of hydrocarbons to form hydrogen and carbon monoxide as described in the present application at page 5, line 17 – page 6, line 17. Hirasawa, on the other hand, discloses a fuel filter that includes a ceramic material capable of activating water, which according to the invention can also activate fuel by separating clusters of fuel molecules into individual molecules, which supposedly increases the area for contact with oxygen during

combustion (see Hirasawa '618 at col. 2, lines 21-30). There is no disclosure in the reference of a reformer or a reforming reaction, and there is also no disclosure of a reformer catalyst. The Chung et al reference also fails to disclose a reformer or a reformer catalyst. Accordingly, Applicants respectfully submit that the Office Action has not made out a case of *prima facie* obviousness. Accordingly, Applicants request that the rejection be withdrawn.

If there are any additional charges with respect to this response or otherwise, please charge them to Deposit Account No. 50-0831 maintained by Applicants' attorney.

Respectfully submitted,



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